

23. (New) A computer-implemented method for estimating market value of a used vehicle, the method comprising:

A) receiving data from a historical database consisting of a number K of used vehicle nearest neighbor records, each used vehicle nearest neighbor record comprising resale information and a plurality of used vehicle features, at least one target used vehicle record comprised of a plurality of used vehicle features, at least one constraint for determining a neighbor relationship between a pair of used vehicles, and a neighborhood distance function for determining a distance between a pair of used vehicles; and

B) determining an estimated value for the at least one target used vehicle based on the data from the historical database, the at least one target used vehicle record, the at least one constraint, and the neighborhood distance function,

wherein the estimated value of the at least one target used vehicle is relied upon by individuals to at least price used vehicles for resale.

24. (New) The method of claim 23 wherein the determining step includes the use of global estimation using neural networks.

25. (New) The method of claim 23 wherein the determining step includes the use of global estimation using linear regression.

26. (New) The method of claim 23, wherein determining step B) is comprised of:

B1) for each used vehicle nearest neighbor record in the historical database, determining a weighted estimated value for the used vehicle nearest neighbor based on the data from the historical database, the at least one target used vehicle record, the at least one constraint, and the neighborhood distance function; and

B2) determining an estimated value for the at least one target used vehicle based on the weighted estimated values for the number K of used vehicle nearest neighbors.

27. (New) The method of claim 23, wherein the resale information includes at least one item selected from the group consisting of resale date, region, mileage, condition, resale channel, and resale price.

28. (New) The method of claim 27, wherein the plurality of vehicle features for each used vehicle nearest neighbor record and the at least one target used vehicle record individually include at least two items selected from the group consisting of vehicle type, model, series, trim level, engine type, transmission type, moon roof equipped, leather interior, interior color, and exterior color.

29. (New) The method of claim 27, wherein the resale information includes resale price and resale region.

30. (New) The method of claim 29, wherein the at least one constraint includes a constraint selected from the group consisting of the pair of vehicles are the same model, the pair of vehicles are the same series, the pair of vehicles have the same model year, the pair of vehicles are the same vehicle series, the difference in mileage between the pair of vehicles is less than about 3,000 miles.

31. (New) The method of claim 30, wherein the at least one used vehicle record further comprises planned resale information.

32. (New) The method of claim 31, wherein the planned resale information includes at least one item selected from the group consisting of intended resale date, region and resale channel.

33. (New) A computer-implemented method for estimating market value of a used vehicle, the method comprising:

A) receiving data which includes:

V_1 comprised of a number N of v^1 , each v^1 comprising resale information and f^1 , V_2 comprised of at least one v^2 , each v^2 comprised of f^2 , Const, F_d , K , and $Error_p$;

- B) determining an Error_K based on V_1 , Const , F_d , and K ; and
- C) if Error_K is less than about Error_p , then
 - C1) determining an estimated value for each v^2 in V_2 based on V_1 , V_2 , Const , F_d , and K ;
 - C2) setting K to K plus 1 and Error_p to Error_K ; and
 - C3) looping to step B),

wherein:

V_1 equals data from a historical database comprised of a number N of used vehicle records,

v^1 equals a used vehicle record in V_1 ,

f^1 equals a plurality of vehicle features of v^1 ,

V_2 equals a data set comprised of at least one target used vehicle record,

v^2 equals a target used vehicle record,

f^2 equals a plurality of vehicle features of v^2 .

Const equals an at least one constraint for determining a neighbor relationship between a pair of used vehicles,

F_d equals a neighborhood distance function for determining a distance between a pair of used vehicles,

K equals a nearest neighbor value,

Error_p equals a previous estimation error, and

Error_K equals a used vehicle market error,

wherein the estimated value of each v^2 in V_2 is relied upon by individuals to at least price used vehicles for resale.

34. (New) The method of claim 33, wherein the resale information includes at least one item selected from the group consisting of resale date, region, mileage, condition, resale channel, and resale price.

35. The method of claim 33 wherein step B) is comprised of:

- B1) for each v^1 in V_1 ,

B11) determining a neighbor group V^* of K used vehicles v^* for v from V_1 based on Const , F_d , and f^1 ;

B12) for each v^* in V^* , determining a weighted estimated value for v^1 based on v^* , f^1 and F_d ;

B13) determining an estimated value for v^1 based on each weighted estimated value of v^1 ;

B14) determining an estimated error for v^1 based on the estimated value for v^1 and the resale price of v^1 ; and

B2) determining Error_K based on the estimated error for each v^1 in V_1 , and N .

36. (New) The method of claim 33 wherein step C1) is comprised of:
for each v^2 in V_2 ,

C11) determining a nearest neighbor group V^{**} of K used vehicles v^{**} for v^2 from V_1 based on Const , F_d , f^1 , and f^2 ;

C12) for each v^{**} in V^{**} , determining a weighted estimated value for v^2 based on v^{**} , F_d , f^1 , and f^2 ;

C13) determining an estimated value for v^2 based on each weighted estimated values of v^2 .

37. (New) The method of claim 36 further comprising C14) storing v^2 with the estimated value for v^2 in a data set V_3 of used vehicles v^3 with estimated market values.

38. (New) The method of claim 33, wherein f^1 and f^2 include at least two items selected from the group consisting of vehicle type, model, series, trim level, engine type, transmission type, moon roof equipped, leather interior, interior color, and exterior color.

39. (New) The method of claim 38, wherein Const includes a constraint selected from the group consisting of the pair of vehicles are the same model, the pair of vehicles are the same series, the pair of vehicles have the same model year, the pair of vehicles

are the same vehicle series, the difference in mileage between the pair of vehicles is less than about 3,000 miles.

40. (New) The method of claim 39, wherein each v_2 further comprises planned resale information, wherein the planned resale information includes at least one item selected from the group consisting of intended resale date, region and resale channel.

41. (New) The method of claim 33, wherein the determining step C1) includes the use of global estimation using neural network.

42. (New) The method of claim 33, wherein the determining step C1) includes the use of global estimation using linear regression.
